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EXAMINER	
JACOB, MARY C	
ART UNIT	**PAPER NUMBER**
2123	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,350	RAMANATHAN, GOVINDARAJ	
	Examiner	Art Unit	
	Mary C. Jacob	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 January 2007* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The response filed on 1/5/07 has been received and considered. Claims 1-17 are presented for examination.

Response to Amendment

2. It is noted that Claim 17 is labeled as "Original", however, the claim has been amended to correct a grammatical error. Although the amendment to the claim has been considered, it is requested that Applicant correct this error in the response to this Office Action.

Drawings

3. The objections to the drawings in the previous Office Action, not repeated below, have been withdrawn in response to the amendments to the drawings and specification, filed 1/5/07.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 200.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as

either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The objections to the disclosure have been withdrawn in response to the amendments to the specification, filed 1/5/07.

Claim Objections

6. The objections to Claim 17 have been withdrawn in response to the amendments to the claims, filed 1/5/07.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-9 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. The rejections of claims 1 and 5 under 35 U.S.C. 112, second paragraph have been withdrawn in response to the amendments to the claims, filed 1/5/07.

10. The rejection of claim 14 under 35 U.S.C. 112, second paragraph with regard to the term "any number of the set of actions" has been withdrawn in response to the amendments to the claims, filed 1/5/07.

11. The rejection of claim 14 under 35 U.S.C. 112, second paragraph with regard to "while it is understood what happens when the user-provided action behavior implementation is hooked for action, it is unclear as to what happens when the user-provided action behavior is not hooked for action" as recited in the prior office action, has been withdrawn in response the arguments presented by Applicant that are considered to be persuasive in light of further consideration of the claim language.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

13. Claims 1-5, 13-16 are rejected under 35 U.S.C. 102(a) as being anticipated by Kim et al ("Design and Implementation of Home Network Systems Using UPnP Middleware for Networked Appliances", IEEE Transactions on Consumer Electronics, Volume 48, Issue 4, Nov 2002, page(s): 963 – 972).

14. As to Claim 1, Kim et al teaches: a method of generically emulating devices in a device connectivity protocol, the method comprising: processing a description of a device to be emulated in the device connectivity protocol, the description specifying a

set of actions of the device (page 965, column 1, paragraphs 1 and paragraph 2, lines 5-8; Figure 2, "display of device info" and "display of service and action info"; Figure 10 and description); in response to receiving an action request per the device connectivity protocol, validating whether the action request matches an action out of the set of actions specified in the description (page 965, column 1, paragraph 4; Figure 2, "Action Invocation" loop); upon validating the action request to match the action, performing a default behavior consistent with the description (page 965, column 1, paragraph 4; Figure 2, "Action Invocation" loop).

15. As to Claim 2, Kim et al teaches: wherein performing the default behavior comprises producing a response message containing a default value consistent with a data type specified for a return parameter of the action in the description (page 965, column 1, paragraph 4; Figure 2, "User Request" and "Action Invocation" loops and description; page 967, column 1, paragraph 3).

16. As to Claim 3, Kim et al teaches: wherein performing the default behavior for an action having a set of input and output parameters corresponding to state variables of the device comprises: setting the corresponding state variables of the device to values of the respective input parameters contained in the action request (page 968, column 2, last sentence); producing a response with output parameters set to values of the corresponding state variables of the device (page 965, column 1, paragraph 2, lines 6-8 and paragraph 4); and producing an eventing message if the action modified any of the evented variables (page 965, column 1, paragraph 4; page 967, column 2, last sentence).

17. As to Claim 4, Kim et al teaches: providing hooks to interface user-provided action behavior implementations, if any, for the set of actions (page 964, column 2, paragraph 2, lines 6-10; page 965, column 1, paragraphs 2-4); upon validating the action request to match the action, first checking whether there is a user-provided action behavior implementation for the action (Figure 2, "Action Invocation" loop); and performing the default behavior consistent with the description if there is no user-provided action behavior implementation, and otherwise performing the user-provided action behavior implementation for the action (Figure 2, "Action Invocation" loop; page 965, column 1, paragraph 2, lines 6-8 and paragraph 4).

18. As to Claim 5, Kim et al teaches: wherein the hooks interface user-provided action behavior implementations of some number fewer than all of the set of actions (page 965, column 1, paragraph 4; Figure 2, "Action Invocation" loop).

19. As to Claim 13, Kim et al teaches: computer-readable media having stored thereon a software framework of a generic device emulator for execution on a computer to provide emulation of an operation of a device within a device connectivity architecture consistent with a textual description of the device, wherein the description of the device specifies data formats of requests and responses for a set of actions that the device is capable of (page 965, column 1, paragraphs 1 and paragraph 2, lines 5-8; Figure 2, "display of device info" and "display of service and action info"; Figure 10 and description), the generic device emulator comprising: program code for receiving action requests directed to the device within the device connectivity architecture (page 964, column 2, paragraph 2, lines 6-10; page 965, column 1, paragraphs 2-4); program code

for validating whether an action request matches that of an action specified in the description (page 965, column 1, paragraph 4; Figure 2, "Action Invocation" loop); and program code for performing a default behavior producing a response for the action consistent with the data format specified in the description (page 965, column 1, paragraph 4; Figure 2, "Action Invocation" loop).

20. As to Claim 14, Kim et al teaches: program code for providing hooks to interface user-provided action behavior implementations of any number of the set of actions (page 964, column 2, paragraph 2, lines 6-10; page 965, column 1, paragraphs 2-4); and program code for checking upon validating that an action request matches that of the action specified in the description whether a user-provided action behavior implementation is presently hooked for the action (Figure 2, "Action Invocation" loop); and program code operating in a case that a user-provided action behavior implementation is presently hooked for the action to invoke the user-provided action behavior implementation in place of the default behavior (Figure 2, "Action Invocation" loop; page 965, column 1, paragraph 2, lines 6-8 and paragraph 4).

21. As to Claim 15, Kim et al teaches: wherein performing the default behavior comprises producing a response message containing a default value consistent with the data format of the response specified for the action in the description (page 965, column 1, paragraph 4; Figure 2, "User Request" and "Action Invocation" loops and description; page 967, column 1, paragraph 3).

22. As to Claim 16, Kim et al teaches: wherein the program code for performing the default behavior for the action in which the data format of the request and response has

a set of input and output parameters corresponding to state variables of the device comprises: program code for setting the corresponding state variables of the device to values of the respective input parameters contained in the action request (page 968, column 2, last sentence); and program code for producing the response with output parameters set to values of the corresponding state variables of the device (page 965, column 1, paragraph 2, lines 6-8 and paragraph 4).

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

24. Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al as applied to claim 1 above, and further in view of Chirashnya et al (US Patent 6,560,720).

25. Kim et al teaches generically emulating devices in a device connectivity protocol, processing the description of an emulated device, receiving an action request per the device connectivity protocol and upon validating the action request to match the action, performing the default behavior consistent with the emulated device description.

26. Kim et al does not expressly teach applying a defect behavior to messages produced to emulate the device, randomly applying a defect behavior out of a set of

defect behaviors to messages produced to emulate the device in the device connectivity protocol and invoking a user-provided implementation of the defect behavior.

27. Chirashnya et al teaches improved methods for fault simulation and diagnostics in packet-switched data networks wherein errors are systematically injected into a data network for the purposes of debugging and diagnostics (column 2, lines 40-47), to overcome existing problems in debugging and diagnostics that include time consuming processes (column 1, lines 55-59), the need to take the network off-line to diagnose non-deterministic failures (column 2, lines 8-15), the inability of testing tools to simulate transient, non-deterministic failures, and the inability to allow errors to be injected and altered on the fly during a simulation (column 2, lines 34-37). Chirashnya et al teaches applying a defect behavior to messages (column 7, lines 42-43; Figure 3, element 112), wherein applying the defect behavior comprises invoking a user provided implementation of the defect behavior (column 7, lines 46-52; column 24, lines 32-40) and randomly applying a defect behavior out of a set of defect behaviors to messages produced to emulate the device in the device connectivity protocol (column 7, lines 43-52).

28. Kim et al and Chirashnya et al are analogous art since they are both directed to a computer network system wherein devices communicate with one another through a device connectivity protocol.

29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the emulation of devices in a device connectivity protocol as taught by Kim et al to include applying a defect behavior to messages, wherein

applying the defect behavior comprises invoking a user provided implementation of the defect behavior and randomly applying a defect behavior out of a set of defect behaviors to messages produced to emulate the device in the device connectivity protocol as taught by Chirashnya et al since Chirashnya et al teaches improved methods for fault simulation and diagnostics in packet-switched data networks wherein errors are systematically injected into a data network for the purposes of debugging and diagnostics (column 2, lines 40-47), to overcome existing problems in debugging and diagnostics that include time consuming processes (column 1, lines 55-59), the need to take the network off-line to diagnose non-deterministic failures (column 2, lines 8-15), the inability of testing tools to simulate transient, non-deterministic failures, and the inability to allow errors to be injected and altered on the fly during a simulation (column 2, lines 34-37).

30. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al as modified by Chirashnya et al as applied to claim 6 above, and further in view of Krumel (US Patent 7.013,482).

31. Kim et al as modified by Chirashnya et al teach generically emulating devices in a device connectivity protocol wherein defect behavior is applied to messages produced to emulate the device in the device connectivity protocol.

32. Kim et al as modified by Chirashnya et al do not expressly teach wherein the defect behavior is applied to packets of a particular type.

33. Krumel teaches a relatively inexpensive, uncomplicated "plug and play" type of internet protection system that can be easily connected and configured by relatively unsophisticated users that filters internet data packets in real time and without packet buffering (column 2, lines 10-19; column 2, line 60-column 3, line 4) wherein a packet type of a received packet data is determined, then, it is determined whether to pass or fail the packet (column 6, lines 43-53). If the packet passes, it is relayed on to the computers on the network, or if it fails, it is "junked" by changing the bits in a manner such that the packet is corrupted and will be detected by the receiving computers as invalid or unacceptable (column 4, line 59-column 5, line 4). This junking of a packet applies defect behavior to the packet of a particular type.

34. Kim et al as modified by Chirashnya et al and Krumel et al are analogous art since they are directed to applying defect behavior to messages in a device connectivity protocol.

35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the application of defect behavior to messages produced to emulate the device in the device connectivity protocol as taught by Kim et al as modified by Chirashnya et al to further include applying defect behavior to packets of a particular type as taught by Krumel since Krumel teaches a relatively inexpensive, uncomplicated "plug and play" type of internet protection system that can be easily connected and configured by relatively unsophisticated users that filters internet data packets in real time and without packet buffering (column 2, lines 10-19; column 2, line 60-column 3, line 4).

36. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krumel, in view of Kim et al and Dugan et al ("Design of Interfaces for Power Systems Analysis Components", Power Engineering Society Summer Meeting, Volume 2, 18-22, Page(s): 852 – 857, July 1999).

37. As to Claim 10, Krumel teaches: reading a defect configuration representing at least one defect behavior to be applied to a type of packet transmitted from a device per the device connectivity protocol (column 4, line 66-column 5, line 4; column 6, lines 26-30 and lines 43-53; column 11, lines 6-13); upon producing the packet of a type for which a defect behavior is represented in the defect configuration, applying the defect behavior to the packet (column 4, line 66-column 5, line 4; column 6, lines 43-53; column 11, lines 6-13); and transmitting the packet as modified by applying the defect behavior (column 4, line 66-column 5, line 4; column 11, lines 57-66).

38. Krumel fails to teach transmitting packets from emulated devices in a device connectivity protocol and representing the defect configuration in a tagged text format.

39. Kim et al teaches a home network system employing Universal Plug and Play middleware that allow devices to join and leave the network and to learn about other networked home appliances, and a compact embedded interface device for networked home appliances that provides a common interface between the networked home appliances (page 963, Introduction, paragraphs 2 and 5), wherein the household devices are emulated in the system using XML descriptions (Table 2; page 965, column

1, paragraph 1; Figure 10) and wherein the system is tested in a laboratory (Figure 15 and description).

40. Dugan et al teaches an exposition of ideas for industry standard interfaces between software applications and models since there is an obvious need for software applications and component models from different vendors to inter-operate (pate 852, Introduction, paragraph 1, sentence 1 and paragraph 4, sentence 1) wherein the standard interface tending toward a minimal an generic approach enabling "plug and play" capability is a sensible approach (page 854, column 1, last paragraph) and wherein eXtensible Markup Language (XML) is a popular technology using tagged text streams as a data transfer means that has great potential application to power system analysis since market-up documents have a natural hierarchical structure corresponding to most power system models (page 853, section II, paragraph 4; page 856, section C).

41. Krumel, Kim et al and Dugan et al are analogous art since Krumel and Kim et al teach the communication between devices in a device connectivity protocol, wherein Kim et al teaches the devices in the connectivity protocol described through an XML description, and Dugan teaches the use of tagged text in XML.

42. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the application of defect behavior to packets transmitted between devices in a device connectivity protocol as taught by Krumel to transmit these defective packets between emulated devices as taught by Kim et al for the purposes of testing a networked system including emulated devices since Kim et al teaches the testing of emulated devices in a device connectivity protocol in a home network system

employing Universal Plug and Play middleware that allow devices to join and leave the network and to learn about other networked home appliances, and a compact embedded interface device for networked home appliances that provides a common interface between the networked home appliances (page 963, Introduction, paragraphs 2 and 5; Figure 15 and description).

43. It would have been obvious to one of ordinary skill at the time the invention was made to modify the defect behavior to be applied to a type of packet transmitted in a device connectivity protocol as taught by Krumel to be represented in a tagged text format as taught by Dugan et al since Dugan et al teaches an exposition of ideas for industry standard interfaces between software applications and models since there is an obvious need for software applications and component models from different vendors to inter-operate (pate 852, Introduction, paragraph 1, sentence 1 and paragraph 4, sentence 1) wherein eXtensible Markup Language (XML) is a popular technology using tagged text streams as a data transfer means that has great potential application to power system analysis since market-up documents have a natural hierarchical structure corresponding to most power system models (page 853, section II, paragraph 4; page 856, section C).

44. As to Claim 11, Krumel as modified by Kim et al and Dugan et al teach: wherein applying the defect behavior comprises invoking a user-provided implementation of the defect behavior (Krumel: column 4, line 66-column 5, line 4; column 12, lines 8-12; column 15, lines 5-10; column 21, lines 57-64) wherein the user defined failure criteria invokes the application of defect behavior.

45. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krumel as modified by Kim et al and Dugan et al as applied to claim 11 above, and further in view of Chirashnya et al.

46. Krumel as modified by Kim et al and Dugan et al teach emulating devices in a device connectivity protocol wherein defect behavior is applied to packets transmitted between devices.

47. Krumel as modified by Kim et al and Dugan et al do not expressly teach randomly applying a defect behavior out of a set of defect behaviors to messages produced to emulate the device in the device connectivity protocol.

48. Chirashnya et al teaches improved methods for fault simulation and diagnostics in packet-switched data networks wherein errors are injected into a data network for the purposes of debugging and diagnostics (column 2, lines 40-47), to overcome existing problems in debugging and diagnostics that include time consuming processes (column 1, lines 55-59), the need to take the network off-line to diagnose non-deterministic failures (column 2, lines 8-15), the inability of testing tools to simulate transient, non-deterministic failures, and the inability to allow errors to be injected and altered on the fly during a simulation (column 2, lines 34-37) wherein a defect behavior out of a set of defect behaviors is randomly applied to messages produced to emulate the device in the device connectivity protocol (column 7, lines 43-52).

49. Krumel as modified by Kim et al and Dugan et al and Chirashnya et al are analogous art since they are directed to applying defect behavior in to messages transmitted between devices in a device connectivity protocol.

50. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the application of defect behavior to packets transmitted between devices as taught by Krumel as modified by Kim et al and Dugan et al to further include the random application of a defect behavior as taught by Chirashnya et al since Chirashnya et al teaches improved methods for fault simulation and diagnostics in packet-switched data networks wherein errors are injected into a data network for the purposes of debugging and diagnostics (column 2, lines 40-47), to overcome existing problems in debugging and diagnostics that include time consuming processes (column 1, lines 55-59), the need to take the network off-line to diagnose non-deterministic failures (column 2, lines 8-15), the inability of testing tools to simulate transient, non-deterministic failures, and the inability to allow errors to be injected and altered on the fly during a simulation (column 2, lines 34-37).

51. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al as applied to claim 13 above, in view of Krumel and Dugan et al.

52. Kim et al teaches emulating devices in a device connectivity protocol consistent with a textual description of the device wherein action requests are received by devices in the device connectivity protocol, wherein the devices are described as XML documents (Figure 10 and description).

53. Kim et al does not expressly teach program code for reading a defect configuration representing in a tagged text format at least one defect behavior to be applied to a type of packet transmitted from the emulation of the device within the device connectivity architecture; program code for applying the defect behavior to a packet upon producing the packet of a type for which a defect behavior is represented in the defect configuration, and program code for transmitting the packet as modified by applying the defect behavior.

54. Krumel et al teaches a relatively inexpensive, uncomplicated "plug and play" type of internet protection system that can be easily connected and configured by relatively unsophisticated users that filters internet data packets in real time and without packet buffering (column 2, lines 10-19; column 2, line 60-column 3, line 4) that includes reading a defect configuration representing at least one defect behavior to be applied to a type of packet transmitted from a device per the device connectivity protocol (column 4, line 66-column 5, line 4; column 6, lines 26-30 and lines 43-53; column 11, lines 6-13); upon producing the packet of a type for which a defect behavior is represented in the defect configuration, applying the defect behavior to the packet (column 4, line 66-column 5, line 4; column 6, lines 43-53; column 11, lines 6-13); and transmitting the packet as modified by applying the defect behavior (column 4, line 66-column 5, line 4; column 11, lines 57-66).

55. Dugan et al teaches an exposition of ideas for industry standard interfaces between software applications and models since there is an obvious need for software applications and component models from different vendors to inter-operate (pate 852,

Introduction, paragraph 1, sentence 1 and paragraph 4, sentence 1) wherein the standard interface tending toward a minimal an generic approach enabling "plug and play" capability is a sensible approach (page 854, column 1, last paragraph) and wherein eXtensible Markup Language (XML) is a popular technology using tagged text streams as a data transfer means that has great potential application to power system analysis since market-up documents have a natural hierarchical structure corresponding to most power system models (page 853, section II, paragraph 4; page 856, section C).

56. Kim et al, Krumel and Dugan et al are analogous art since Kim et al and Krumel teach the communication between devices in a device connectivity protocol, wherein Kim et al teaches the devices in the connectivity protocol described through an XML description, and Dugan teaches the use of tagged text in XML.

57. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the emulation of devices in a device connectivity protocol as taught by Kim et al by including program code for reading a defect configuration representing format at least one defect behavior to be applied to a type of packet transmitted from the emulation of the device within the device connectivity architecture, program code for applying the defect behavior to a packet upon producing the packet of a type for which a defect behavior is represented in the defect configuration, and program code for transmitting the packet as modified by applying the defect behavior as taught by Krumel et al since Krumel et al teaches a relatively inexpensive, uncomplicated "plug and play" type of internet protection system that can be easily connected and configured by relatively unsophisticated users that filters internet data

packets in real time and without packet buffering (column 2, lines 10-19; column 2, line 60-column 3, line 4).

58. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the emulation of devices in a device connectivity protocol wherein the devices are described as XML documents (Figure 10 and description) as taught by Kim et al to include the use of tagged text as taught by Dugan et al since Dugan et al teaches an exposition of ideas for industry standard interfaces between software applications and models since there is an obvious need for software applications and component models from different vendors to inter-operate (pate 852, Introduction, paragraph 1, sentence 1 and paragraph 4, sentence 1) wherein eXtensible Markup Language (XML) is a popular technology using tagged text streams as a data transfer means that has great potential application to power system analysis since market-up documents have a natural hierarchical structure corresponding to most power system models (page 853, section II, paragraph 4; page 856, section C).

Response to Arguments

59. Applicant's arguments filed 1/5/07 have been fully considered but they are not persuasive.

60. Applicant argues (page 12 of Remarks): "Kim's home server describes the traditional invocation of actions by devices, resulting in updated status variables, which does not teach or suggest "performing a default behavior consistent" with a "description of a device to be emulated" as recited in claim 1". In regard to "performing a default

behavior", Applicant further argues: "the cited portion of Kim describes, "updated state variables" which indicate the changing of an appliance state. This teaches away from the performance of a "default behavior" which would not require state variables to update". In regard to "description of a device to be emulated", Applicant further argues: "Kim makes clear that the action is being performed by an actual UPnP compatible appliance, and is not performed in order to emulate a device", and "Kim's description of information about appliances which are currently attached to a home network system does not teach or suggest "a description of a device to be emulated" as recited in claim 1.

61. In response to the arguments regarding the performance of a default behavior consistent with the description, the recited portions of Kim describe the updating of state variables when an action is requested by a user. It is understood that this updating of the state variables is performing a default behavior of the device since, when the action is requested, the state variables in the description of the device are updated in response to the invoking of the action service request, this "updating" or "servicing" of the action request being the default behavior consistent with the description of the device that describes the state variables contained in the description of the device.

62. In response to the arguments that Kim does not teach "a description of a device to be emulated", the following recitation from the specification cited in on page 11 of the remarks states the following: "The emulated device can be any device that can operate in the UPnP architecture (i.e., any UPnP-compliant device)". Kim teaches specifically "appliance emulators" that are described by the "description documents" referred to in

the cited portions of Kim (specifically, Figure 10 and description). Further, Kim states the appliances are UPnP-compatible (page 965, column 1, paragraph 1, sentence 2) which indicates that they are UPnP-compliant. Further, the devices operate in a UPnP architecture as shown and described in Figure 1. Therefore, Kim describes "descriptions" of "devices to be emulated" as recited in the claim and as recited in the specification.

63. Applicant argues (page 14-15 of Remarks): "Krumel's filtering criteria are used for the removal of bad packets, and thus do not teach or describe "at least one defect behavior to be applied to a type of packet" which is then transmitted after "applying [of] the defect behavior to the packet[s]", "...it teaches against the desirability of defining defects to be applied to packets. And therefore, it cannot teach or suggest "a defect configuration representing...at least one defect behavior to be applied to a type of packet" as well as "applying the defect behavior to the packet" and "transmitting the packet as modified by applying the defect behavior" as recited in claim 10."

64. As to this argument, Krumel describes "at least one defect behavior to be applied to a type of packet" (column 4, line 66-column 5, line 4) wherein it is taught that "junking a packet" is defined as either changing bits or truncating data, depending on the type of link. Further, Krumel teaches the packet type, which indicates the type of link and therefore how the packet will be "junked" is determined (column 6, lines 43-53). The disclosure of "changing bits" or "truncating data" to a particular packet type encompass, "at least one defect behavior to be applied to a type of packet". Further, Krumel teaches

the transmitting of the packet after the defect behavior is applied (column 5, lines 1-4; column 11, lines 57-66) wherein the packet that is junked is detected by the "receiving computers" as invalid or unsuccessful. It is understood that the junked packet must be transmitted in order to be received by "receiving computers".

Conclusion

65. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

66. Zintel et al (US Patent 7,130,895) teaches a device control model that provides an integrated set of addressing, naming, discovery and description processes that enables automatic, dynamic and ad-hoc self-setup by devices to interoperate with other devices on a network.

67. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

68. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C. Jacob whose telephone number is 571-272-6249. The examiner can normally be reached on M-F 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Mary C. Jacob
Examiner
AU2123

MCJ
2/20/07

2/21/07
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